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ARGON (REFRIGERATED LIQUID)		



Label 2.2 : Non flammable, non toxic gas.

1- IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY


product name	ARGON REFRIGERATED LIQUID
Chemical formula	Argon Refrigerated Liquid (Ar)
Product type	Liquefied gas
Product use	Synthetic/Analytical chemistry.
company	Gases for medical and industrial gases The Egyptian Arabic Republic
Emergency phone numbers	23818102/23818109/23818032 Hot line 19802

2- COMPOSITION/INFORMATION ON INGREDIENTS


Substance/Preparation Substance

Substance name	Index Nr	EEC No	CAS No	Contents	Classification
Argon (refrigerated)	--	231-147-0	7440-37-1	%100	--

Contains no other components or impurities that will influence the classification of the product.


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3- HAZARDS IDENTIFICATION

Hazards identification	Refrigerated liquefied gas. Contact with product may cause cold burns or frostbite. In high concentrations may cause asphyxiation.
Hazard pictograms	
Signal word	Warning
Hazard statements	Contains refrigerated gas; may cause cryogenic burns or injury. May cause frostbite. May displace oxygen and cause rapid suffocation.

4- FIRST AID MEASURES

Inhalation	In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation.
Skin/eye contact	Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped. Immediately flush eyes thoroughly with water for at least 15 minutes. In case of frostbite, spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance.
Ingestion	Ingestion is not considered a potential route of exposure.

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5- FIRE FIGHTING MEASURES

Specific hazards	Exposure to fire may cause containers to rupture/explode.
Flammable Class	Non flammable
Hazardous combustion products	None
Suitable extinguishing media	All known extinguishants can be used.
Specific methods	If possible, stop flow of product. Move away from container away and cool with water from a protected position. If leaking do not spray water onto container. Water surrounding area (from protected position) to contain fire.
Special protective equipment for fire fighters	In confined space use self-contained breathing apparatus.

6- ACCIDENTAL RELEASE MEASURES

Personal precautions

Evacuate area

Ensure adequate air ventilation.

Wear self-contained breathing apparatus when entering unless atmosphere is proved to be safe


Environmental precautions

Try to stop release.

Prevent from entering sewers, basements and work pits, or any place where its accumulation can be dangerous

Clean up methods

Ventilate area.

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7- HANDLING AND STORAGE


Storage	Keep container below 50°C in a well-ventilated place.
Handling	Water absorption into the container must be prevented. Do not allow back feeding into the container. Use only properly selected equipment appropriate for this product, supply pressure, and temperature. Contact the Gases Company for Medical and Industrial Gases in Egypt if you are in doubt. Refer to the instructions for handling containers for gases for medical and industrial gases.

8- EXPOSURE CONTROLS/PERSONAL PROTECTION

Appropriate engineering controls	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9- PHYSICAL AND CHEMICAL PROPERTIES

Physical State at 20°C	Refrigerated Liquefied gas	Critical temperature	-122 °C	Solubility mg/l water	67 mg/l
Molecular weight	40	Relative density, gas (Air=1)	1.38	Appearance/Color	Colorless gas
Melting point	-189 °C	Relative density, liquid (water=1)	1.4	Odor	No odor warning properties
Boiling point	-186 °C	Vapor Pressure	20°C Not applicable	Auto ignition temperature	Not applicable
Flammability range	Non flammable	Other data	Gas/vapor heavier than air. May accumulate in confined Spaces, particularly at or below ground level.		


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10- STABILITY AND REACTIVITY

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	No specific data.
Incompatible materials	No specific data.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur

11- TOXICOLOGICAL INFORMATION

Acute toxicity	Not available.
Irritation/Corrosion	Not available.
Sensitization	Not available.
Mutagenicity	Not available.
Carcinogenicity	Not available.
Reproductive toxicity	Not available.
Teratogenicity	Not available.
Specific target organ toxicity (single exposure)	Not available.
Specific target organ toxicity (repeated exposure)	Not available.
Aspiration hazard	Not available.
Information on the likely routes of exposure	Not available.
Potential acute health effects	
Eye contact	Extremely cold material. Liquid can cause burns similar to frostbite.
Inhalation	No known significant effects or critical hazards.
Skin contact	Extremely cold material. Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite
Ingestion	Ingestion of liquid can cause burns similar to frostbite.

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12- ECOLOGICAL INFORMATION


General	Can cause frost damage to vegetation.
Toxicity	Not available.
Persistence and degradability	Not available.

13- DISPOSAL CONSIDERATIONS

General	Do not discharge into any place where its accumulation could be dangerous.
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14- TRANSPORT INFORMATION

UN No	1951
Proper shipping name	Argon, Refrigerated liquid
Class/Div	2.2
ADR/RID Hazard Nr	220
Labeling ADR	Label 2.2: non flammable non toxic gas
Other transport information	<p>Avoid transport on vehicles where the load space is not separated from the driver's compartment.</p> <p>Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.</p> <p>Before transporting product containers ensure that they are firmly secured and:</p> <ul style="list-style-type: none"> - Cylinder valve is closed and not leaking. - Valve outlet cap nut or plug (where provided) is correctly fitted. - Valve protection device (where provided) is correctly fitted. - There is adequate ventilation. - Compliance with applicable regulations.

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Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product.

DOT Classification	Limited quantity Yes. Quantity limitation Passenger aircraft/rail: 75 kg. Cargo aircraft: 150 kg.
TDG Classification	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2). Explosive Limit and Limited Quantity Index 0.125 Passenger Carrying Road or Rail Index 75 Special provisions 42
IATA	Quantity limitation Passenger and Cargo Aircraft: Forbidden. Cargo Aircraft Only: 500 kg. Packaging instructions: 202.
Special precautions for user	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Transport in bulk according to IMO instruments	Not available.

15- REGULATORY INFORMATION

Number in Annex I of Dir 67/548	Not included in Annex I.
EC Classification	Not classified as dangerous preparation.
EC Labelling	No EC labelling required
Symbols	None
Risk phrases	None
Safety phrases	None

16- OTHER INFORMATION

Asphyxiant in high concentrations. Keep container in well ventilated place. Do not breathe the gas. Ensure all national/local regulations are observed. The hazard of asphyxiation is often overlooked and must be stressed during operator training. Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out. Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted. This MSDS is for information purposes only and is subject to change without notice.

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